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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,145	09/30/2003	Un Nyoung Sa	054358-5014	3831

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EXAMINER	
NGUYEN, THANH NHAN P	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/673,145	SA ET AL.	
	Examiner	Art Unit	
	(Nancy) Thanh-Nhan P. Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This communication is responsive to RCE dated 11/28/2005. Claims 1-21 are pending for the examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 5-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 5-11, "a polarizing compensation film" makes the claims unclear since there is no explanation what a polarizing compensation film really is in specification. Examiner does not understand exactly what applicant meant by that, and therefore, for the examination purpose, "a polarizing compensation film" in claims 5-11 will be interpreted as "a compensation film", and examined accordingly.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatano et al U.S. Patent No. 6,320,629, in view of Song et al U.S. Patent Application Publication No. 2003/0122984 and Gu et al U.S. Patent No. 6,359,672.

Regarding claims 1, Hatano et al discloses a liquid crystal display device, comprising: a transparent insulating substrate (101a); a gate line (104) and a gate electrode on the transparent insulating substrate; a gate insulating film (105), an active layer (130), source (132a) and drain electrodes (132b), and a data line (116) on the transparent insulating substrate; a passivation film (106) formed on the transparent insulating substrate including the source and drain electrodes and the data line; a compensation film (108) formed to contact the passivation film; and a pixel electrode (112) formed on at least the compensation film, [figs 1 & 2; col. 7, lines 55-67].

Hatano et al lacks disclosure of an ohmic contact layer in thin film transistor.

Song et al discloses an ohmic contact layer (13") in thin film transistor for ohmic contact and over-etch protection, [fig. 2; par. 0011]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form an ohmic contact layer in thin film transistor for ohmic contact and over-etch protection.

Hatano et al further lacks disclosure of the pixel electrode overlaps the data line.

Gu et al discloses the pixel electrode (3) overlaps the data line (5), [fig. 1], for the benefit of increasing the pixel aperture ratio (or pixel opening size) of the liquid crystal display, [col. 5, lines 41-44]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the pixel electrode overlaps the data line for the benefit of increasing the pixel aperture ratio (or pixel opening size) of the liquid crystal display.

Regarding claim 2, even though Hatano et al lacks disclosure of wherein the pixel electrode includes ITO, it was conventional at the time to have electrode includes

ITO, as evidenced by Song et al, [par. 0034], and therefore having the benefit of being available. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have electrode includes ITO for the benefit of being available.

Claim 3 is met the discussion regarding claim 1 rejection above.

Claim 4 is met the discussion regarding claim 2 rejection above.

Claims 5-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al U.S. Patent No. 6,582,862 in view of Abileah et al U.S. Patent No. 5,499,126.

Regarding claim 5, Nakamura et al discloses a liquid crystal display device comprising a transparent insulating substrate (5); a black matrix (6) formed on the transparent insulating substrate; a color filter layer (7R, 7G, 7B) formed on an upper surface of the black matrix, an overcoat film (8) on the color filter layer, and a common electrode (9), [see fig. 1].

Nakamura et al lacks disclosure of a compensation film formed on the overcoat film; a common electrode formed on the compensation film.

Abileah et al discloses a compensation film (67, 68, 70) formed on the color filter layer (42, 44, 46); and a common electrode (64) formed on the compensation film for the benefit of eliminating color leakages and maximizing the field of view of the display, [see col. 1, lines 8-9]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify primary reference (Nakamura) by secondary reference (Abileah) to have a compensation film formed on the overcoat

film; a common electrode formed on the compensation film for the benefit of eliminating color leakages and maximizing the field of view of the display.

Regarding claim 6, Nakamura et al discloses wherein an overcoat film (8) has a planar upper surface, [fig. 1], and formed between the color filter layer and the compensation film as discussed in claim 5.

Regarding claim 7, Nakamura et al discloses the common electrode includes ITO, [see col. 30, lines 58-59].

Claims 8 and 11 are met the discussion regarding claim 5 rejection above.

Claim 9 is met the discussion regarding claim 6 rejection above.

Claim 10 is met the discussion regarding claim 7 rejection above.

Regarding claim 12, Nakamura et al discloses a liquid crystal display device, comprising: a thin film transistor substrate (2); a pixel electrode formed on the thin film transistor substrate (not shown); a color filter substrate (1) including a black matrix (6); a common electrode (9) formed on the color filter substrate; a liquid crystal material (3) formed between the thin film transistor substrate and the color filter substrate, [fig. 1].

Nakamura et al lacks disclosure of a compensation film disposed between the common electrode and the color filter substrate, wherein the compensation film compensates for phase variations of light transmitted through the liquid crystal material.

Abileah et al discloses a compensation film (67, 68, 70) disposed between the common electrode (64) and the color filter substrate (40), wherein the compensation film compensates for phase variations of light transmitted through the liquid crystal material for the benefit of eliminating color leakages and maximizing the field of view of

the display, [see col. 1, lines 8-9]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a compensation film disposed between the common electrode and the color filter substrate, wherein the compensation film compensates for phase variations of light transmitted through the liquid crystal material for the benefit of eliminating color leakages and maximizing the field of view of the display.

Claim 13 is met the discussion regarding claims 11 & 6 rejection above.

Regarding claim 14, Nakamura et al discloses wherein the overcoat film (8) is formed between red (7R), green (7G), and blue (7B) color filter layers of the color filter film, [fig. 1].

Regarding claim 15, Nakamura et al discloses wherein the overcoat film contacts a black matrix formed between the red, green, and blue color filter layers, [fig. 1].

Regarding claim 16, Nakamura et al discloses wherein the overcoat film contacts the red, green, and blue color filter layers, [fig. 1].

Regarding claim 17, Nakamura et al discloses a liquid crystal display device, comprising: a first substrate (2) including a plurality of pixel electrodes (not shown); a second substrate (1) including a common electrode (9), a color filter film (7R, 7G, 7B), and a black matrix (6); a liquid crystal material (3) formed between the first and second substrates; an overcoat film (8) on the color filter film, and directly contacts the color film, [fig. 1].

Nakamura lacks disclosure of a compensation film formed beneath the common electrode, wherein the overcoat film directly contacts the compensation film. However, this limitation is met the discussion regarding claim 6 rejection above.

Regarding claim 18, Nakamura et al discloses wherein an upper surface of the overcoat film is planar, [fig. 1].

Claim 19 is met the discussion regarding claim 17 rejection above.

Regarding claims 20 & 21, Nakamura et al discloses wherein the overcoat film directly contacts the black matrix, [fig. 1].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen

Examiner
Art Unit 2871
-- December 21, 2005 --

TN

ANDREW SCHECHTER
PRIMARY EXAMINER